

NOTES ON TASMANIAN LICHENS.

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During my visit to Tasmania in January last, to attend the annual meeting of the Australasian Association at Hobart, I took such opportunities as offered themselves to make a collection of the lichens of the island; and hearing from Mr. W. A. Weymouth that he had a small collection of these lowly yet lovely plants, I was kindly permitted to look through his gatherings, and to select some 40 specimens of such as appeared rare and worthy of microscopic examination. The examination of a lichen in all its parts by the aid of a microscope is a work requiring considerable time and patience; but a still more time-consuming labour is the examination of the multitudinous and fragmentary works on lichenology, which must be undertaken when a species is believed to be new to science. Every care has been taken, but should an older and more experienced lichenologist detect errors in my work, then "*Magna est veritas et prevalebit.*"

LICHENES.

ORDER I.—COLLEMACEÆ, *Müll. Arg. Enum. Lich. Gen.*, p. 18, et *Lich. Socot.*

TRIBE I.—COLLEMÆ, *Körb.*, *Par.* p. 408.

Leptogium chloromelum v. *granulare*, *Müll. Arg.* On mossy stones, Mt. Wellington, W. A. Weymouth, No. 123.

ORDER II.—EPICONIACEÆ, *Müll. Arg.*, *Enum. Lich. Gen.* et *Lich. Socot.*

TRIBE II.—CALICIEÆ, *Müll. Arg.*, *Enum. Lich. Genève*, p. 19.

Calicium Victorizæ, *C. Knight.* On decorticated tree, Falls Track, Mt. Wellington, W. A. Weymouth, No. 132.

ORDER III.—LICHENACEÆ, *Müll. Arg.*, *Lich. Socot.* et *Enum. Lich. Gen.*

TRIBE III.—SPHÆROPHORÆ, *Fr.*, Lich. Europ., p. 403.

- Sphærophoron compressum, *Ach.* Mt. Wellington, J. Shirley, No. 57.
 „ coralloides, *Pers.* Mt. Wellington, on earth, J. Shirley, No. 71; on wood, Tasman Peninsula, W. A. Weymouth, No. 35.
 „ fragile, *Pers.* Mt. Wellington, J. Shirley, No. 44.
 „ tenerum, *Laur.* Newman's Creek, Tasman Peninsula, W. A. Weymouth, No. 18; and Mt. Wellington, J. Shirley, No. 51.

TRIBE IV.—BÆOMYCEÆ, *Müll. Arg.*, Lich. Cath., p. 7.

- Bæomyces heteromorphus, *Nyl.* On rock and earth, St. Crispin's, W. A. Weymouth, Nos. 107 and 120.

TRIBE V.—CLADONIEÆ, *Müll. Arg.*, Lich. Gen., p. 22.

- Stereocaulon ramulosum, *Ach.* Mt. Wellington, J. Shirley, No. 56.
 „ proximum v. macrocarpoides, *Nyl.* Mt. Wellington, J. Shirley, Nos. 48 and 50.
 Clathrina aggregata, *Müll. Arg.* Mt. Wellington, J. Shirley, No. 55 (a); and Huon Road, Hobart, W. A. Weymouth, No. 136.
 „ schizophora, *Müll. Arg.* On dead eucalyptus stump, Lauriston Rivulet, Kangaroo Point, Tasmania, W. A. Weymouth, No. 108; and Mt. Wellington, J. Shirley, No. 55 (b).
 Cladonia sylvatica v. pycnoclada, *Del.* Oyster Cove, Tasmania, W. A. Weymouth, No. 137.
 „ squamosa v. acuminata, *Ach.* Falls Track, Mt. Wellington, W. A. Weymouth, No. 135.
 „ rangiformis, *Hoffm.* Falls Track, Mt. Wellington, W. A. Weymouth, No. 134.
 „ verticellata, *Flk.* Mt. Wellington, J. Shirley, No. 54.
 „ pyxidata, *Fr.* Mt. Wellington, J. Shirley, No. 52.
 „ „ v. neglecta, *Tuck.* Huon Road, Hobart, W. A. Weymouth, No. 129.
 „ delicata v. subsquamosa, *Nyl.* On decaying wood, St. Crispin's, Mt. Wellington, W. A. Weymouth, No. 109.
 „ fimbriata v. radiata, *Fr.* Mt. Wellington, J. Shirley, No. 47.
 „ fimbriata v. carneo-pallida, *Ach.* Mt. Wellington, J. Shirley, No. 53.

- Cladonia cornucopioides*, *Fr.* Falls Track, Mt. Wellington, W. A. Weymouth, No. 121. Ploughed Field, Mt. Wellington, J. Shirley, Nos. 43, 46, 49.
 „ *deformis*, *Hffm.* Mt. Wellington, on summit, J. Shirley, No. 45.

TRIBE VI.—USNEÆ, *Müll. Arg.*, Bot. Socot., p. 349. Th. M. Fries, Gen. Heterolich., p. 47.

- Usnea dasypogoides*, *Nyl.* Mt. Wellington, J. Shirley, No. 65.

TRIBE VII.—PARMELIÆ, *Müll. Arg.*, Lich. Génév., p. 31.

- Stictina cinnamomea*, *Rich.* Mt. Wellington, J. Shirley, No. 58.

- Sticta Freycinetii*, *Del.* Bower Creek and St. Crispin's, W. A. Weymouth, Nos. 116 and 128.

- „ *dissimulata*, *Nyl.* Falls Track, Mt. Wellington, W. A. Weymouth, No. 123.

- „ *fossulata*, *Duf.* Mt. Wellington, J. Shirley, No. 64(a).

- „ „ v. *physciospora*, *Nyl.* Mt. Wellington, J. Shirley, No. 64 (b.)

- Parmelia tenuirima*, *Tayl.* Mt. Wellington, J. Shirley, No. 62.

- „ *olivacea*, *Ach.* Mt. Wellington, J. Shirley, No. 60.

- „ *pertusa*, *Schrank.* Mt. Wellington, J. Shirley, No. 61.

- „ *physodes*, *Ach.* Mt. Wellington, J. Shirley, No. 63.

- „ „ v. *placorhodioides*, *Nyl.* Mt. Wellington, J. Shirley, No. 59.

- Theloschistes parietinus*, *Norm.* On rocks, Bellerive, Kangaroo Point, W. A. Weymouth, No. 126.

TRIBE VIII.—PSOROMEÆ (*Fr.*), *Nyl.*

- Psoroma sphinctrinum*, *Nyl.* Pedder's Gully, Kangaroo Point, W. A. Weymouth, No. 1.

- „ *sphinctrinum* v. *pholidotoides*, *Nyl.* Mt. Wellington, J. Shirley, No. 66.

TRIBE IX.—PLACODIÆ, *Müll. Arg.*, Lich. Gen., p. 37.

- Placodium gelidum*, *Körb.* Mt. Wellington, No. 139, W. A. Weymouth, and No. 67, J. Shirley.

TRIBE X.—LECANOREÆ, *Müll. Arg.*, Bot. Socot., p. 359.

- Calloporisma cinnabarina*, *Müll. Arg.* On rocks, Bellerive, Kangaroo Point, W. A. Weymouth, No. 127.

TRIBE XI.—LECIDEÆ, Müll. Arg., Lich. Gen., p. 50.

Biatora immarginata, *R. Brown*. St. Crispin's, W. A. Weymouth, No. 104.

„ *russula*, *Ach.* Huon Road, W. A. Weymouth, No. 124.

„ *cera-rufa*, *Shirley*, sp. nov. Thallus sordid white, thin opaque, sub-pulverulent, effuse; apothecia .5 mm., with white waxy margin, entire or flexuous, and plane rufous disk; hypothecium pallid; spores 8, colourless, simple, .013—·015 × .006 mm.; paraphyses colourless, thickish, glutinated. On bark, Bower Track, Mount Wellington, W. A. Weymouth, No. 141.

Patellaria (*Psorothecium*) *melanotropa*, *Nyl.* On bark, St. Crispin's, W. A. Weymouth, No. 119.

Patellaria (*Psorothecium*) *Taitensis*, *Mnt.* On bark, New Town Rivulet, and St. Crispin's, Mt. Wellington, W. A. Weymouth, Nos. 138 and 154.

Patellaria (*Psorothecium*) *biclipea*, *Shirley*, sp. nov. Thallus sordid-glaucous, thin, effuse, smooth, opaque, sparingly diffract; apothecia small, .5—1 mm., numerous, not crowded, when young with distinct, entire, concolorous margin, and concave, suffused disk; when mature plano-convex, and margin obscured, aqueose-fuscous to nigro-fuscous, and often parti-coloured; lamina and hypothecium fuscous; spores 8, 2-locular, colourless, oval, straight or curved, 16—20 μ × 5—6 μ ; paraphyses short, thick. On bark, St. Crispin's, W. A. Weymouth, No. 155 (a).

Near *Patellaria Taitensis*, *Mnt.*, but spores much smaller and more acutely pointed; allied also to *P. grossa*, *Pers.*, but lamina not hyaline.

Patellaria (*Bacidia*) *Weymouthii*, *Shirley*, sp. nov. Thallus sordid white or pallid-sordid-flavescent, thin, shining, speckled over with black spermagonia, bordered by a nigro-fuscous zone; apothecia to 1 mm., nigro-fuscous, from plane and marginate to convex and shapeless, when young immersed and the disk thalline clothed; hypothecium fuscous; spores acicular, colourless, .026—·03 × .002—·0025 mm., 1- ∞ -septate, at both ends acute, curved; paraphyses clavate, delicate, separating. On bark, St. Crispin's, W. A. Weymouth, Nos. 112, 115, 131.

Buellia disciformis, *Fr.* On willow, Hobart Rivulet, W. A. Weymouth, No. 122.

„ *parasema*, *Th. Fr.* On bark, Huon Road, W. A. Weymouth, No. 125.

„ *polospora*, *Leigh*, v. *asperata*, *Shirley*, var. nov.

This lichen has the thallus and spores of the type, but the apothecia are fringed with granular asperities, giving them at first sight a resemblance to *L. leucoblephara*, *Nyl.* On bark, Fork Creek, W. A. Weymouth, No. 144.

Blastenia consanguinea, *Müll. Arg.* Bears considerable likeness to *B. ferruginea* v. *cinnamomea*, *Fr.*, but the spores are larger. St. Crispin's, on bark, W. A. Weymouth, No. 106.

Heterothecium pauciseptatum, *Shirley*, sp. nov. Thallus white or pallid glaucous, in glebulæ, or fine, rounded, pallid greenish, pulverulent ridges, effuse; apothecia to 2 mm., fuscous; when young with plane disk, and a thin, very slightly prominent, pale brown margin; when mature slightly convex and immarginate; hypothecium and lamina white or pallid; spores 2—3, colourless, 3—5 septate, with 1—3 cellules in each cell, $\cdot 04 - \cdot 05 \times \cdot 02$ mm.; paraphyses coarse. On bark, Bower Creek, Mt. Wellington, W. A. Weymouth, No. 142.

TRIBE XII.—CÆNOGONIEÆ, *Müll. Arg.*, Lich. Parag., p. 18.

Cænogonium acrocephalum, *Müll. Arg.* So named from the capitate paraphyses. On moss, Henty River, W. Coast, and St. Crispin's, Mt. Wellington, W. A. Weymouth, Nos. 140 and 117.

TRIBE XIII.—GRAPHIDEÆ, *Müll. Arg.*, Graph. Fee, pp. 4 and 13.

Arthonia multiformis, *Shirley*, sp. nov. Thallus thin, flavescent, smooth, sub-continuous; arcellæ very numerous, small, various, from punctiform to 1 mm., difformate, rufo-nigro-fuscous; spores 8, pupa-shaped, 3—6 locular, $30 \times 6 \mu$, terminal loculi largest, and these unequal, the 1—3 central loculi broader in transverse diameter, appressed, and constricted at the septa; occasionally the smaller of the polar loculi is again transversely divided. On bark, Springs, Mt. Wellington, W. A. Weymouth, No. 111.

Chiodecton perplexum, *Nyl.* On bark, St. Crispin's, W. A. Weymouth, No. 118.

TRIBE XIV.—PYRENULÆ, *Müll. Arg.*, Pyr. Cub., p. 375.

Pseudopyrenula galactina, *Shirley*, sp. nov. Thallus white, opaque, thinly crustaceous; apothecia of a single very small perithecium, thalline veiled and concolorous, with minute punctate ostiola, then delapso-urceolate and revealing the black pericarp; spores colourless, 4-locular, ovoid, $\cdot 018 - \cdot 02 \times \cdot 006 - \cdot 009$, 1-seriate in a narrow ascus; paraphyses delicate. On bark, St. Crispin's, W. A. Weymouth, No. 113.

Pyrenula chloroplaca, *Shirley*, sp. nov. Thallus flavid, smooth, shining, thin, nigro-marginate, apothecium of a simple small perithecium, lower half thalline clothed and innate, upper half hemispherical, black, nigro-ostiolate; spores brown, 2—4 locular, loculi lenticular, $\cdot 008 \times \cdot 004$ mm., elliptical. In a direct light the two terminal cells are often invisible, being close to the apices. On bark, St. Crispin's, and the Springs Track from Fern Tree, W. A. Weymouth, Nos. 114 and 161.